

**IN THE DISTRICT COURT OF THE UNITED STATES
FOR THE WESTERN DISTRICT OF NORTH CAROLINA
CHARLOTTE DIVISION**

CIVIL CASE NO. 3:08cv576

**PRECISION LINKS INCORPORATED,)
Plaintiff,)
vs.) O R D E R
USA PRODUCTS GROUP, INC. and)
HOME DEPOT U.S.A., INC.,)
Defendants.)
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THIS MATTER is before the Court on the parties' respective motions [Docs. 52, 55] for the construction of certain claim language in U.S. Patent No. 5,673,464 ("the '464 Patent"). The Court held a claim construction hearing on June 10, 2010.

I. PROCEDURAL HISTORY

On December 15, 2008, the Plaintiff Precision Links Incorporated ("Precision Links" or "Plaintiff") filed this action for patent infringement against the Defendants USA Products Group, Inc. ("USA Products") and Home Depot USA, Inc. ("Home Depot") (collectively "Defendants"). [Doc.

1]. The Defendants filed their Answer and Counterclaim on April 8, 2009, denying infringement and asserting a claim of invalidity. [Doc. 20]. Thereafter, the Court entered a Pretrial Order and Case Management Plan [Doc. 24], setting certain scheduling deadlines and establishing a claim construction schedule.

On May 19, 2009, the Plaintiff filed a Motion for Preliminary Injunction [Doc. 25], but this motion was stricken due to its failure to comply with the type requirement and page limitation set forth in the Pretrial Order and Case Management Plan. [Doc. 37]. The Plaintiff subsequently re-filed its motion in conformity with the type requirement and page limitation on June 16, 2009. [Doc. 38]. The Court denied the Plaintiff's request for preliminary injunctive relief on September 22, 2009. [Doc. 46].

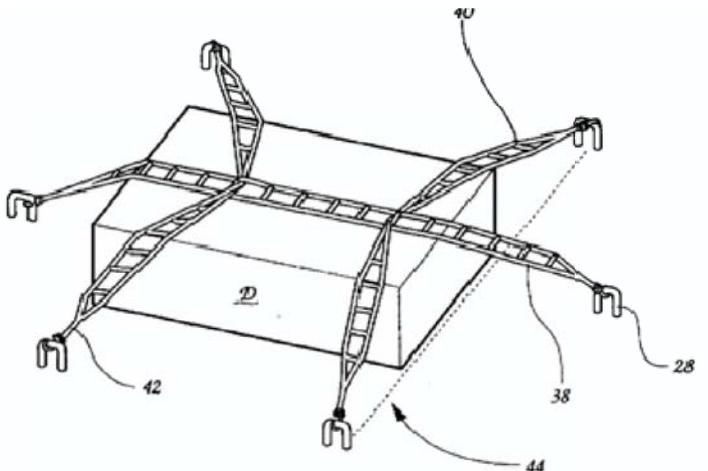
On October 9, 2009, the parties filed a Joint Claim Construction and Prehearing Statement. [Doc. 47]. Thereafter, on December 18, 2009, the Defendants filed their motion for claim construction. [Doc. 52]. After receiving an extension of time to do so, the Plaintiff filed its claim construction motion on December 21, 2009. [Doc. 55]. The parties' respective responses were filed on January 15, 2009 [Docs. 63, 65], and replies were filed on January 29, 2010 [Docs. 66, 67]. On March 15, 2010,

the Court entered an Order consolidating this matter with Precision Links Incorporated v. True Value Company, No. 3:09cv205, for the purposes of claim construction only. [Doc. 69]. The Plaintiff voluntarily dismissed this latter action, however, on March 24, 2010 [No. 3:09cv205, Doc. 20]. Thereafter, the Court scheduled the claim construction hearing in the present case to take place on June 10, 2010.

Having been fully briefed and argued, the issue of claim construction is now ripe for disposition.

II. FACTUAL BACKGROUND

The invention disclosed in the '464 Patent relates to a "Cargo Securement System and Tie Down Strap," which is essentially a tie-down strap of the type used to restrain cargo during transport. One of the central features of the claimed invention is a set of openings in the main body of the strap that allows the body of a second identical strap to pass through and be redirected. See '464 Patent, Fig. 10 (reproduced above).



It is alleged that the Plaintiff is the record owner of the '464 Patent . [Doc. 1 at ¶8]. It is further alleged that the Plaintiff and its licensees have sold these tie-down straps in various retail outlets throughout the United States, including Home Depot. [Id. at ¶12].

The Defendant USA Products is the manufacturer and/or importer of the CARGO BOSS Cargo Control Rubber Tarp Strap ("the Accused Strap"). [Doc. 1 at ¶15; Doc. 20 at ¶15]. It is alleged that USA Products sells the Accused Strap to Home Depot, which has offered and continues to offer the Accused Strap for sale in several of its stores, including stores in this district. [Doc. 1 at ¶15].

There are three independent claims within the '464 Patent. Independent Claim 1 of the '464 Patent provides as follows:

1. A tie down strap extendable between attachment locations in at least intermittent abutment with cargo to restrain movement of the cargo, comprising:

two end portions and an elongateable linearly extending elastic main body portion disposed therebetween,

means formed in at least a first said end portion thereof for attaching said main body portion to an attachment location, and

a plurality of openings integrally formed within and extending in a sequential manner linearly aligned

along said linearly extending main body portion intermediate said end portions, each said opening being dimensioned for the passage therethrough of a main body portion of a second identical tie down strap for the redirection of the second identical tie down strap when the elastic main body portion defining said opening is elongated.

'464 Patent, Col. 6, line 55 to Col. 7 line 4.

Independent Claim 6 provides as follows:

6. A cargo securement system for restraining movement of cargo, comprising:

a plurality of elongateable straps, each said strap having two end portions

[an] elongateable linearly extending main body portion disposed therebetween, and

hook means disposed on each said end portion for removably attaching said end portions to attachment locations, said hook means having engaging portions,

each said main body portion comprising two side members extending in spaced parallel relation between said two end portions and bridge portions that are sequentially arranged along said main body portion and that extend between and secure in parallel relation said two side members, said side members and said bridge portions thereby defining a plurality of openings integrally formed within and extending in a sequential manner linearly along said linear-extending main body portion.

each said strap of the cargo securement system cooperating with other said straps to restrain

movement of the cargo, said bridge portions of each said strap being configured to be received within said engaging portions of said hook means of each said strap in substantially continuous contact therewith for providing attachment locations for said strap, said openings of each said strap being dimensioned for the passage therethrough of a main body portion of another said strap for the redirection of said strap extended therethrough.

Id. at Col. 7, line 33 to Col. 8, line 18.

Independent Claim 8 provides as follows:

8. A cargo securement system, comprising a plurality of elongateable straps, each strap comprising:

two end portions and an elongateable linearly extending elastic main body portion disposed therebetween having a plurality of openings, said main body portion including two side members extending in spaced parallel relation between said two end portions and bridge portions which are sequentially arranged along said main body portion and which extend between and secure in parallel relation said two side members, said bridge portions and said side members thereby defining said openings,

wherein said openings are dimensioned for the passage therethrough of one of said plurality of straps for the redirection of said one strap extended therethrough.

Id. at Col. 8, lines 26-40. Claims 2, 3, 4, and 7 are dependent claims of Claims 1, 6, and 8. The Plaintiff alleges literal infringement of Claims 1, 2,

and 4 by a single Accused Strap and of Claims 1, 2, 3, 4, 6, 7, and 8 by the use of two Accused Straps together. [Doc. 1 at ¶¶ 17, 18].

III. PRINCIPLES OF CLAIM CONSTRUCTION

“The determination of infringement is a two-step process. First, the court construes the claims to correctly determine the scope of the claims. Second, it compares the properly construed claims to the accused device.”

Bell Atlantic Network Services, Inc. v. Covad Communications Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001). The first step in this process, the construction of claims, is a question of law for the Court. Markman v. Westview Instruments, Inc., 517 U.S. 370, 372, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996); Cybor Corp. v. FAS Techs., Inc., 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc). The second step, the comparison of the properly construed claims to the accused device, is typically a question of fact for the jury. See Bell Atlantic, 262 F.3d at 1267.

“It is well-settled that, in interpreting an asserted claim, the court should look first to the intrinsic evidence of record, i.e., the patent itself, including the claims, the specification and, if in evidence, the prosecution history. Such intrinsic evidence is the most significant source of the legally

operative meaning of disputed claim language.” Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996) (citation omitted). The Court should give the disputed claim terms “their ordinary and accustomed meaning as understood by one of ordinary skill in the art.” Bell Atlantic, 262 F.3d at 1267. A person of ordinary skill in the art is deemed to read the claim terms not only in the context of the particular claims in which the disputed terms appear, but also in the context of the entire patent, including the specification and the prosecution history. See Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005).

The claims of the patent “themselves provide substantial guidance as to the meaning of particular claim terms.” Id. at 1314. Specifically, the context in which a term is used within the claim, as well as the usage of that term in other claims of the patent, can be valuable in ascertaining the meaning of a particular claim term. Id. Of course, the claims of the patent cannot be viewed in a vacuum. The Court also “must look at the ordinary meaning in the context of the written description and the prosecution history.” Medrad, Inc. v. MRI Devices Corp., 401 F.3d 1313, 1319 (Fed. Cir. 2005) (quoting DeMarini Sports, Inc. v. Worth, 239 F.3d 1314, 1324 (Fed. Cir. 2001)).

The specification of the patent can be highly instructive in construing the patent claims. As the Federal Circuit has noted, the specification “is always highly relevant to the claim construction analysis.” Vitronics, 90 F.3d at 1582. In fact, the specification is usually dispositive, as “it is the single best guide to the meaning of a disputed term.” Id.; Standard Oil Co. v. Am. Cyanamid Co., 774 F.2d 448, 452 (Fed. Cir. 1985) (“The specification is … the primary basis for construing the claims.”). As such, the Federal Circuit has stated that it is “entirely appropriate for a court, when conducting claim construction, to rely heavily on the written description for guidance as to the meaning of the claims.” Phillips, 415 F.3d at 1317. In some cases, the inventor may provide within the specification a special definition of a claim term which differs from the term’s usual meaning. “In such cases, the inventor’s lexicography governs.” Id. at 1316. The inventor also may disclaim or disavow claim scope within the specification. Where “the inventor has dictated the correct claim scope, … the inventor’s intention, as expressed in the specification, is regarded as dispositive.” Id.

In addition to consulting the specification, the Court also may examine the patent’s prosecution history in construing the terms of the

claims. Markman v. Westview Instruments, Inc., 52 F.3d 967, 980 (Fed. Cir. 1995), aff'd, 517 U.S. 370, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” Phillips, 415 F.3d at 1317. The prosecution history also may be helpful in determining whether the inventor disclaimed any particular interpretation during the prosecution of the patent. See Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005). While it can be helpful in some respects, the prosecution history “often lacks the clarity of the specification and thus is less useful for claim construction purposes.” Phillips, 415 F.3d at 1317.

In addition to examining the intrinsic evidence, the Court is also authorized to consider certain extrinsic evidence, “including expert and inventor testimony, dictionaries, and learned treatises.” Markman, 52 F.3d at 980. Specifically with respect to expert testimony, the Federal Circuit has noted that such testimony “can be useful to a court for a variety of purposes, such as to provide background on the technology at issue, to explain how an invention works, to ensure that the court’s understanding of the technical aspects of the patent is consistent with that of a person of skill in the art, or to establish that a particular term in the patent or the prior art

has a particular meaning in the pertinent field.” Phillips, 415 F.3d at 1318.

The Federal Circuit has cautioned, however, that “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.” Id. The Court must disregard any expert testimony “that is clearly at odds with … the written record of the patent.” Key Pharms. v. Hercon Labs. Corp., 161 F.3d 709, 716 (Fed. Cir. 1998).

While extrinsic evidence may be useful in “shed[ding] useful light on the relevant art,” it is “less significant than the intrinsic record in determining the ‘legally operative meaning of disputed claim language.’” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004) (quoting in part Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n, 366 F.3d 1311, 1318 (Fed. Cir. 2004)). “In sum, extrinsic evidence may be useful to the court, but it is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” Phillips, 415 F.3d at 1319.

With these principles of claim construction in mind, the Court now turns to the claims at issue in the patent-in-suit.

IV. CLAIM CONSTRUCTION

A. Construction of Claim Terms on Which the Parties Agree

The parties have identified the construction of several claim terms and phrases upon which they agree, including “tie down strap,” “to restrain movement of,” “elongated,” “cargo securement system,” “plurality of openings,” “said plurality of straps for the redirection of said one strap,” “contract,” “relaxed,” “hook,” and “‘S’ hook,” “cargo,” and “elongateable.” [Doc. 47 at 2-4; Doc. 56 at 1]. Having reviewed the language of the claims, as well as the intrinsic evidence, the Court agrees with the parties’ construction of these claim terms and therefore will adopt the construction of such terms as proposed by the parties.

B. Disputed Claim Terms, Phrases and Clauses

1. “dimensioned for the passage therethrough”

The parties agree that the question of infringement in this case will likely turn on the Court’s construction of the phrase “dimensioned for the passage therethrough,” which appears in independent Claims 1, 6, and 8. Accordingly, the Court will address this particular claim limitation first.

a. The “Dimensioned” Element in Claim 1

Claim 1 of the ‘464 Patent provides for a tie down strap with a plurality of openings, “each said opening *being dimensioned for the passage therethrough* of a main body portion of a second identical tie down strap for the redirection of the second identical tie down strap when the elastic main body portion defining said opening is elongated.” ‘464 Patent, Col. 6, line 66 to Col. 7, line 4 (emphasis added). In its Order denying the Plaintiff’s motion for preliminary injunction, the Court offered a preliminary construction of this language, construing it to mean as follows:

[U]pon elongation of the first tie down strap, the plurality of openings in the strap become dimensioned for the passage therethrough of a main body portion of a second identical tie down strap, thus permitting redirection of the second identical tie down strap.

[Doc. 46 at 17]. The Defendants contend that the Court should again adopt this construction. [Doc. 52-1 at 13-15]. The Plaintiff contends, however, that the Court should construe this claim language to require that each of the openings must be large enough so that the main body portion of a second strap may be pulled through when the first strap is elongated, even if some deformation of the first strap must occur as the main body portion of the second strap passes through. The Plaintiff argues that requiring the

strap to be properly dimensioned only upon elongation improperly imports a limitation from the specification into the claim. [Doc. 56 at 10-11].

The Court begins its analysis with the claim language itself. The commonly accepted meaning of the term “dimensioned” is “form[ed] to the required dimensions.” Merriam-Webster Online Dictionary, <http://www.merriam-webster.com/dictionary/dimensioned> (last visited June 10, 2010). Thus, the claim describes a series of openings that are “form[ed] to the dimensions required” for the passing through of a second strap. The claim further describes each of the openings in the main body portion of the tie down strap as “being dimensioned. . . *when* the elastic main body portion defining said opening is elongated.” ‘464 Patent, Col. 6, line 66 to Col. 7, line 4 (emphasis added). The plain meaning of this claim language suggests that the first strap must achieve the dimensions required for the passage therethrough of the main body of a second strap *by the act of elongation.*

The plain language of Claim 1 does not support the Plaintiff’s contention that passage of the second strap may be accomplished by deformation of the strap opening during the passage itself. The claim provides that each opening is “dimensioned *for* the passage therethrough”

of the main body portion of a second strap. Notably, the claim does not recite that the opening is dimensioned *by* the passage therethrough of a second strap. Indeed, if the strap opening was not properly dimensioned prior to the second strap passing through, such that deformation of the strap opening was required to allow the second strap to pass through, then the opening was not properly “dimensioned” by the elongation of the strap and therefore would not be encompassed by the plain language of this claim.

The specification makes clear that the strap is “dimensioned for” the passage therethrough of the main body portion of a second strap *by the elongation of the first strap*. See ‘464 Patent Abstract (“The openings ... are dimensioned to receive therethrough a main body portion of another strap when the main body portion defining the opening is elongated.”); Col. 2, lines 26-29 (“each opening being dimensioned for the passage therethrough of a main body portion of a tie down strap when the elastic main body portion defining the openings is stretched or otherwise elongated”); Col. 2, lines 53-54 (“each opening is stretchable to accommodate the passage therethrough by another strap”); Col. 5, lines 5-7 (“Hence, upon elongation of the strap 10, each opening 20 becomes

dimensioned for receipt therethrough of a like but unstretched strap according to the present invention."); Col. 5, lines 12-14 ("the strap of the present invention features openings which are dimensioned upon elongation of the strap for receipt therethrough of another like strap"); Col. 5, lines 39-42 ("each one of the openings in the main body portion of each strap is dimensioned so that, upon elongation of its respective strap, a main body portion of another strap may pass therethrough").

Under the Plaintiff's proposed construction of the "dimensioned" element, some "minor deformation" of the strap's opening would be permitted as the main body portion of the second strap passes through the opening, but any "substantial deformation" would not. [See Doc. 66 at 4]. This proposed construction finds no support in any of the intrinsic evidence. No reference is made in the claim language to any deformation of the strap, whether "minor" or "substantial." Moreover, there is nothing in the specification which would support the Plaintiff's reading of this claim language. Accordingly, the Plaintiff's construction must be rejected.

The statements made by the Applicant in distinguishing prior art during the prosecution of the '464 Patent also support a finding that Claim 1 requires the dimensioning of the strap's openings to be created by the

elongation of the strap. [See Doc. 53-2 at 57 ("in order for the holes (18) to be sufficiently elongateable to allow a main body portion of an identical strap to pass therethrough, which is not disclosed by Hartman, the teachings of Hartman that the longitudinal stretch of the strap should be limited must be completely disregarded"); Id. at 59 ("One of ordinary skill in the art at the time of the invention would be taught by Hartman the benefits and techniques for drastically limiting the degree to which a tie down strap can be stretched, i.e., to the point where the tie down strap is just stretchable enough for facilitating hooking and unhooking of S-shaped hooks through anchor holes in the strap, which is substantially less than the degree of stretching required for the main body portion of a strap to pass through an anchor hole.")].

The Plaintiff contends that Claim 1 merely requires that "the openings are large enough to allow the second strap through without excessively loading the first strap" and the "recommended stretching tolerance of the [first] strap is not exceeded." [Doc. 56 at 10]. This construction, however, is not supported by any intrinsic evidence. Nothing in the specification refers to "excessively loading" the strap or the "recommended stretching tolerance" of such strap. Nor does the prosecution history cited by the

Plaintiff support this proposed construction. In the passage cited by the Plaintiff [Doc. 53-2 at 57], the Applicant urged for the allowance of Claim 1 by expressly arguing that the elongateability of the claimed strap permits it to be dimensioned for the passage therethrough of another strap. Nothing in this section of the prosecution history refers to “excessive loading” or a “recommended stretching tolerance” as the reason for the claimed “dimensioned” limitation.

Contrary to the Plaintiff’s argument, the limitation that the strap openings become dimensioned by the elongation of the strap does not improperly import claim limitations from the preferred embodiment of the specification. Rather, dimensioning by elongation is the only construction supported by the plain language of the claim and the intrinsic evidence of record. Accordingly, the phrase “each said opening being dimensioned for the passage therethrough of a main body portion of a second identical tie down strap for the redirection of the second identical tie down strap when the elastic main body portion defining said opening is elongated” as used in Claim 1 shall be construed to mean that by the elongation of the first tie down strap, the plurality of openings in said strap become dimensioned for the passage therethrough of a main body portion of a second identical tie

down strap, thus permitting redirection of the second identical tie down strap.

b. The “Dimensioned” Element in Claims 6 and 8

Claim 6, which provides for a type of cargo securement system consisting of a plurality of elongateable straps with openings, contains a similar limitation to that contained in Claim 1:

said openings of each said strap being dimensioned for the passage therethrough of a main body portion of another said strap for the redirection of said strap extended therethrough.

‘464 Patent, Col. 8, lines 15-18. Claim 8, which also provides for a type of cargo securement system containing a plurality of elongateable straps with openings, has similar language as well:

wherein said openings are dimensioned for the passage therethrough of one of said plurality of straps for the redirection of said one strap extended therethrough.

Id. at Col. 8, lines 38-40. Notably, neither Claim 6 nor Claim 8 recites that the openings are dimensioned for passage through of a second strap “when . . . elongated,” as is recited in Claim 1.

The plain language of Claim 6 and Claim 8 requires that the openings be dimensioned for the passage through of another strap. In other words,

the plain language of Claims 6 and 8 do not require the act of elongation in order to achieve the required dimensions for passage; rather, the openings must be dimensioned such that a second strap can pass through, even without the main body portion of the strap being elongated. Thus, unlike Claim 1, wherein the dimensions required for the passing through of another strap are created by elongation of the strap, Claims 6 and 8 encompass a strap wherein the openings are already dimensioned for passage of a second strap before the strap is ever elongated. There is no limitation in either Claim 6 or Claim 8 requiring that the dimensioning occur upon elongation of the strap, and the Court will not read such limitation into the claim.¹

Thus, the Court will construe the phrase “said openings of each said strap being dimensioned for the passage therethrough of a main body portion of another said strap for the redirection of said strap therethrough” and “wherein said openings are dimensioned for the passage therethrough of one of said plurality of straps for the redirection of said one strap extended therethrough” as used in Claim 6 and Claim 8, respectively, to

¹This is not to say that by elongating the strap, the openings are no longer dimensioned for the passing through of a second strap. Presumably, if the openings were dimensioned for such passage before elongation, they would maintain such dimensioning when the strap is elongated.

mean that even before the strap is elongated, the plurality of openings in the strap are dimensioned for the passage therethrough of a main body portion of a second identical tie down strap, thus permitting redirection of the second identical tie down strap.

2. “end portions” (1,4,6,8)

Claim 1 provides for a tie down strap comprising, among other things “two end portions.” ‘464 Patent, Col. 6, line 58. Claims 4, 6, and 8 recite a similar limitation. Id. at Col. 7, line 20; Col. 7, line 36; Col. 8, line 28. The Defendant contends that the term “end portions” should be construed to mean the terminal portions of a tie down strap that extend beyond the outer edges of the first and last openings of a tie down strap and that are attached to the main body portion of a tie down strap. [Doc. 52-1 at 22]. The Plaintiff contends that this term should be construed as the extremities of the linear strap where the hooks or other attachment means connect to the strap. [Doc. 55 at 1].

The specification makes clear that the end portions are distinct from the main body portion of the strap. See ‘464 Patent, Figs. 1, 2; Col. 2, lines 10-11 (“The main body portion of the strap is disposed between the two end portions . . .”); Col. 3, lines 51-52 (“The main body portion 12 is

disposed between two end portions 14"); Col. 3, lines 54-56 ("As contemplated by the present invention, the main body portion 12 is attached to but reference thereto is not intended to include the end portions 14"). Plaintiff's construction of "end portions" refers only to the undefined "extremities of the claimed strap and fails to specify where the claimed strap's main body portion ends and its end portions begin. Because the '464 Patent specifies that the end portions extend beyond the outer edges of the first and last openings of the claimed strap, these boundaries should be included in the construction of the term "end portions."

The Plaintiff urges the Court to include in its construction the "function" of the end portions, which the Plaintiff contends is "where the hooks or other attachment means connect to the strap." [Doc. 56 at 12]. The term "end portions" is not a means-plus-function term, however, and thus the inclusion of this alleged function in its construction is not warranted. In any event, the hook or other attachment means in the end portions of the strap is addressed by separate claim language, "means formed in," which is construed below.

After reviewing the specification, the Court concludes that the term “end portions” should be construed to mean the terminal portions of a tie down strap that extend beyond the outer edges of the first and last openings of a tie down strap and that are attached to the main body portion of a tie down strap.

3. “an elongateable linearly extending elastic main body portion disposed therebetween”

Claim 1 provides for a tie down strap comprising, among other things, “two end portions and an *elongateable linearly extending elastic main body portion disposed therebetween . . .*” ‘464 Patent, Col. 6, lines 58-59 (emphasis added). Claim 8 recites a similar limitation. Id. at Col. 8, lines 27-30. The Plaintiff contends that this phrase should be construed as a whole to mean any strap body which is capable of being stretched a useful amount in the linear direction, that is located between the end portions of the strap. [Doc. 55 at 1-2]. The Defendants contend, on the other hand, that the terms “elongateable,” “elastic,” and “main body portion” should be construed separately, as these terms are used not only in connection with this phrase but also in connection with distinctly different phrases that appear throughout the multiple claims. [Doc. 63 at 21]. The Plaintiff concedes that there does not appear to be any substantive differences

between the parties' proposed construction of these terms and does not object to the Court construing these terms as proposed by the Defendants. [Doc. 56 at 12]. Accordingly, the term "elongateable" is construed to mean capable of being stretched; the term "elastic" is construed to mean elongateable and having a tendency to return to its original shape upon elongation; and the term "main body portion" is construed to mean the portion of a tie down strap that extends between the outer edges of the first and last openings of a tie down strap.

4. "means formed in"

Claim 1 of the '464 Patent provides for a tie down strap comprising, among other things, "*means formed in* at least a first said end portion thereof for attaching said main body portion to an attachment location" '464 Patent, Col. 6, lines 60-62 (emphasis added). The parties agree that this is a means-plus-function claim element. See 35 U.S.C. §112, ¶6.

The construction of a means-plus-function limitation involves two steps. First, the Court must determine the claimed function. Second, the Court must identify the corresponding structure in the written description that performs that function. JVW Enters., Inc. v. Interact Accessories, Inc., 424 F.3d 1324, 1330 (Fed. Cir. 2005) (citations omitted).

In the present case, the parties agree that the function of this claim element is attaching the main body portion of the tie down strap to an attachment location. The parties disagree, however, as to the structure. The Defendants contend that the only structure identified in the written description that is “formed in” the end portion and that performs the required function is the securement member that is formed as part of the end portion and is not removable therefrom. [Doc. 63 at 23]. The Plaintiff, on the other hand, contends that the underlying structure includes both (1) a securement member that is formed as part of the end portion and is not removable therefrom and (2) a hook that can be releasably secured in an end portion by any conventional means such as by extending the hook through a hole. [Doc. 56 at 12-13].

The parties both identify Column 4, lines 10 through 15 as describing the underlying structure of this claim element:

The end portions 14 each include a securement member that is preferably a hook 22 having an engaging portion 24 for engagement with virtually any type of attachment location. Preferably, the engaging portion 24 is “U”-shaped. *If desired, each hook 22 can be releasably secured in an end portion 14 by any conventional means such as by extending the hook 22 through a hole (not shown), but preferably the hook 22 is formed as part of the end portion 14 and is not removable therefrom.*

‘464 Patent, Col. 4, lines 7-15 (emphasis added).

The Defendants are correct that the only structure identified in the written description that is “*formed in* at least a first said end portion,” as required by Claim 1, and that performs the required function, is the “securement member that is formed as part of the end portion and is not removable therefrom.” The Plaintiff fails to explain how a hook that is “releasably secured in an end portion” is “formed in” the end portion, as explicitly required by Claim 1. If the applicant had intended the attachment means in Claim 1 to cover both embodiments disclosed in the specification, the applicant could have claimed a “means for attaching.” Instead, however, the applicant limited the “means” covered by this claim to those “formed in” the end portion, thereby excluding a “releasably secured” hook extended through a hole. For these reasons, the Court concludes that the structure for the means of this claim element is limited to a securement member that is formed as part of the end portion and is not removable therefrom.²

²The Plaintiff further contends that the underlying structure includes equivalents of these described structures. [Doc. 55 at 3]. As set forth in 35 U.S.C. § 112, ¶6, the structure of a means-plus-function claim element also includes “equivalents thereof.” Thus, it is not necessary for the Court to include the term “equivalents” in its construction of this claim element.

5. “redirection”

Claim 1 provides, in pertinent part, that the tie down strap has “a plurality of openings . . . each said opening being dimensioned for the passage therethrough of a main body portion of a second identical tie down strap for the *redirection* of the second identical tie down strap” ‘464 Patent, Col. 6, line 63 to Col. 7, line 3 (emphasis added). Claims 6 and 8 recite a similar limitation. Id. at Col. 8, lines 16-18; Col. 8, lines 38-40. The Defendants contend that the term “redirection” should be construed to mean the redirection of the linear tension in the second identical tie down strap. [Doc. 52-1 at 26]. The Plaintiff contends that the term should be construed to mean the act of positioning a second strap, once through an opening in a first strap, in one direction on one side of the opening and in a different direction on the other side of the opening. [Doc. 55 at 2]. In its opening brief, however, the Plaintiff concedes that there is not a substantive difference between the constructions proposed by the parties, and thus it does not object to the Court adopting either construction. [Doc. 56 at 13].

The specification supports a construction of this term which includes reference to the redirection of the linear tension of the second strap. See

‘464 Patent, Col. 2, lines 58-60 (“the opening [of the strap] thus becomes an intermediate attachment location for the strap passing therethrough that redirects the linear tension of the strap”). Further, in responding to the Patent Office’s initial rejection of Claim 1, the Applicant stated, “The openings in the strap of the present invention are the catalytic feature resulting in the unique interaction exhibited in securing cargo [B]y passing a strap through an opening of another strap, the strap (and the linear tension extending through the strap) can be redirected.” [Doc. 53-2 at 55].

Accordingly, the Court concludes that the term “redirection” should be construed to mean the redirection of the linear tension in the second identical tie down strap.

6. “side members” and “bridge portions”

Claim 2 provides for a tie down strap according to Claim 1, wherein the main body portion of the strap

comprises two side members extending in spaced parallel relation between said two end portions, and further comprising bridge portions that are sequentially arranged along said main body portion and extend between and secure in parallel relation said two side members, said bridge portions and said side members thereby defining said openings.

‘464 Patent, Col. 7, lines 6-12. Claims 2, 3, 4, 6, 7, 8 also provide for tie down straps with side members and bridge portions. Id. at Col. 7, lines 13-18; Col. 7, lines 19-27; Col. 7, line 33 to Col. 8, line 8; Col. 8, lines 19-25; Col. 8, lines 26-40. The Defendants contend that the term “side members” should be construed to mean the two side pieces of the tie down strap that define the width dimension of each opening, and that the term “bridge portions” should be construed to mean the discrete pieces of the tie down strap that bridge the two side members of the tie down strap and define the length dimension of each opening of the tie down strap. [Doc. 52-1 at 27].

The Plaintiff objects to the Defendants’ proposed construction of these terms, arguing that the Defendants’ proposals are based on a comparison to the dimensions of the invention’s preferred embodiments. The Plaintiff contends that these terms should be construed instead according to their actual structure. Accordingly, the Plaintiff contends that the term “side members” should be construed as the parts of the main body that are parallel along the longest dimension of the strap and are separated by a space or opening, and that the term “bridge portions” should be construed as those areas of the strap, arranged sequentially, which traverse the space between the side members and, together with the side members,

form the perimeter of the openings integrally formed in the main body of the strap. [Doc. 55 at 2-3; Doc. 56 at 13-14].

The specification makes clear that the claimed strap's side members and bridge portions are discrete pieces of the strap that define the length and width of each of the strap's opening. This is not just a preferred embodiment, but is the structure of the claimed straps. '464 Patent, Col. 2, lines 37-38 ("[T]he two side members and bridge portions thereby define the plurality of openings."); Id. at Col. 3, lines 61-64 ("side members 16 and bridge portions 18 thereby define a plurality of openings 20 integrally formed in a linearly sequential manner along the length of the main body portion 12"). Contrary to the Plaintiff's argument, the Defendants' proposed construction of these terms does not incorporate dimensions of the preferred embodiment of the invention, but rather defines the actual structure of the side members and bridge portions of the claimed strap.

See '464 Patent Abstract ("the main body portion comprises two side members that extend between the two end portions in spaced parallel relation and a plurality of bridge portions that extend between and secure the two side members in their parallel relation"); Id. at Col. 3, lines 50-60 ("The main body portion 12 . . . comprises two side members 16 that extend

in spaced parallel relation between the two end portions 14 Bridge portions 18 are sequentially arranged along the length of the main body portion 12 and extend in the widthwise direction to secure the two side members 16 together"). For these reasons, the Court concludes that these terms should be construed as proposed by the Defendants. Thus, the term "side members" shall be construed as the two side pieces of the tie down strap that define the width dimension of each opening, and the term "bridge portions" shall be construed as the discrete pieces of the tie down strap that bridge the two side members of the tie down strap and define the length dimension of each opening of the tie down strap.

7. "engaging portion"

Claim 4 of the '464 Patent provides, in pertinent part, for "[a] tie down strap . . . wherein said attaching means includes a hook at each said end portion having *an engaging portion* configured to receive therein one of said bridge portions for substantially continuous contact therebetween"

'464 Patent, Col. 7, lines 19-23 (emphasis added).

Claim 6 recites a claim for a cargo securement system comprising, among other things, a "hook means disposed on each said end portion for removably attaching said end portions to attachment locations, said hook

means having *engaging portions*” Id. at Col. 7, lines 39-42 (emphasis added). Claim 7 similarly recites a claim for a cargo securement system “comprising two straps and a plurality of ‘S’-hooks having *engaging portions*” Id. at Col. 8, lines 19-21 (emphasis added).

The Defendants contend that the term “engaging portion” should be construed as an engaging surface configured to correspond to the engaging surface of the bridge portions of a tie down strap for substantially continuous and secure engagement therebetween. [Doc. 52-1 at 28]. The Plaintiff objects to the Defendants’ proposed construction, arguing that such construction improperly imports a limitation from the specification into the claim. The Plaintiff proposes that the term should be construed to mean the end of the hook that is attached to the anchor point, the cargo, or the load. [Doc. 55 at 3, Doc. 56 at 14].

The specification provides that the preferred embodiment of the invention has hooks with engaging portions that correspond to the shape of the corresponding bridge portion such that the engaging portion and bridge portions form a substantially continuous and secure engagement. For example, Figures 3 and 4 show a U-shaped engaging portion in continuous and secure engagement with a cylindrical bridge portion, and Figure 5

shows an engaging portion with a 90-degree angle in continuous and secure engagement with a bridge portion that has the same 90-degree angle. ‘464 Patent, Figs. 3, 4, and 5. The secure engagement created between the engaging portion of the hook and the corresponding bridge portions is described through the detailed description of the preferred embodiment. See ‘464 Patent, Col. 4, lines 2-10, 16-22, 25-31.

The specification also provides, however, that the engaging portion of the hook or other securement member allows for “engagement with virtually any type of attachment location.” Id. at Col. 4, lines 9-10. And while Claim 4 recites that the engaging portion of the hook must be configured so as to create “substantially continuous contact” with the corresponding bridge portion, id. at Col. 7, line 22, Claim 6 merely recites a hook means for removably attaching the end portions to “attachment locations,” id. at Col. 7, lines 40-41, and Claim 7 recites a hook that can receive a bridge portion of a strap within its engaging portions, id. at Col. 8, lines 24-25. There is no limitation in either Claim 6 or Claim 7 that requires the engaging portion of the hook to correspond to either the shape of the attachment location or the bridge portion of the strap and to achieve

substantially continuous contact therewith. Accordingly, the Defendants' proposed construction of this term must be rejected.

The Court cannot accept the Plaintiff's proposed construction, however, as it is unclear what is meant by "end of the hook." The "end" of a hook could be a reference to the tip of the hook or, for example, in the case of a "U" shaped hook, it could be a reference to the "U"-shaped portion of the hook which makes contact with the attachment location. As such, the Court must devise its own construction of this claim term. Based on the plain language of the claims and the intrinsic evidence found in the written description, the Court construes the term "engaging portion" to mean the part of the hook or other securement member that is in contact with the attachment location when the hook or other securement member is engaged with the attachment location or that is in contact with the bridge member when the hook or other securement member is engaged with the bridge member.

ORDER

IT IS, THEREFORE, ORDERED that the Defendants' Motion for Construction of Claims of U.S. Patent No. 5,673,464 [Doc. 52] and the

Plaintiff's Motion for Claim Construction [Doc. 55] are **GRANTED** to the extent that the disputed claim terms of U.S. Patent No. 5,673,464 are hereby construed as follows:

- (1) The term "tie down strap" is construed to mean a strap abutting and restraining the movement of cargo.
- (2) The phrase "to restrain movement of" is construed to mean to prevent change of position due to directional changes, vibrations, wind, and/or other forces.
- (3) The term "elongated" is construed to mean stretched.
- (4) The term "cargo securement system" is construed to mean a system employing a plurality of tie down straps used in a cooperating relationship to abut and restrain the movement of cargo.
- (5) The term "plurality of openings" is construed to mean more than one opening.
- (6) The terms "said plurality of straps" and "said one strap" as used in the phrase "said openings are dimensioned for the passage therethrough of one of said plurality of straps for the redirection of

“said one strap extended therethrough” is construed to mean the main body portion of one of said plurality of tie down straps.

- (7) The term “contract” is construed to mean to shorten.
- (8) The term “relaxed” is construed as being free or relieved of tension.
- (9) The term “hook” is construed to mean a curved or angular piece of metal or other hard substance, for catching, pulling, holding or suspending something.
- (10) The term “‘S’ hook” is construed as a metal or other solid material, in the shape of the letter “S,” used as a hook.
- (11) The term “cargo” is construed to mean items or stacks of items transported by truck, automobile, or other vehicle.
- (12) The term “elongateable” is construed to mean capable of being stretched.
- (13) The phrase “each said opening being dimensioned for the passage therethrough of a main body portion of a second identical tie down strap for the redirection of the second identical tie down strap when the elastic main body portion defining said opening is elongated” as used in Claim 1 is construed to mean that by the

elongation of the first tie down strap, the plurality of openings in said strap become dimensioned for the passage therethrough of a main body portion of a second identical tie down strap, thus permitting redirection of the second identical tie down strap.

- (14) The phrase “said openings of each said strap being dimensioned for the passage therethrough of a main body portion of another said strap for the redirection of said strap extended therethrough” and “wherein said openings are dimensioned for the passage therethrough of one of said plurality of straps for the redirection of said one strap extended therethrough” as used in Claim 6 and Claim 8, respectively, is construed to mean that even before the strap is elongated, the plurality of openings in the strap are dimensioned for the passage therethrough of a main body portion of a second identical tie down strap, thus permitting redirection of the second identical tie down strap.
- (15) The term “end portions” is construed to mean the terminal portions of a tie down strap that extend beyond the outer edges of the first and last openings of a tie down strap and that are attached to the main body portion of a tie down strap.

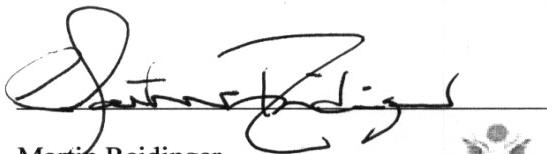
- (16) The term “elastic” is construed to mean elongateable and having a tendency to return to its original shape upon elongation.
- (17) The term “main body portion” is construed to mean the portion of a tie down strap that extends between the outer edges of the first and last openings of a tie down strap.
- (18) The phrase “means formed in” is construed as a means-plus-function limitation, with the function of this claim element being for attaching the main body portion of the tie down strap to an attachment location, and the structure being a securement member that is formed as part of the end portion and is not removable therefrom.
- (19) The term “redirection” is construed to mean the redirection of the linear tension in the second identical tie down strap.
- (20) The term “two side members” is construed to mean the two side pieces of the tie down strap that define the width dimension of each opening.
- (21) The term “bridge portions” is construed to mean the discrete pieces of the tie down strap that bridge the two side members of

the tie down strap and define the length dimension of each opening of the tie down strap.

- (22) The term "engaging portion" is construed to mean the part of the hook or other securement member that is in contact with the attachment location when the hook or other securement member is engaged with the attachment location or that is in contact with the bridge member when the hook or other securement member is engaged with the bridge member.

IT IS SO ORDERED.

Signed: June 17, 2010



Martin Reidinger
United States District Judge

